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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,667	07/21/2003	Joseph I. Smullin	S1330.70004US00	5065
23628	7590	12/13/2006	EXAMINER	
WOLF GREENFIELD & SACKS, PC FEDERAL RESERVE PLAZA 600 ATLANTIC AVENUE BOSTON, MA 02210-2206			LITHGOW, THOMAS M	
			ART UNIT	PAPER NUMBER
			1724	

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/623,667

Applicant(s)

SMULLIN, JOSEPH I.

Examiner

Thomas M. Lithgow

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-69 is/are pending in the application.
- 4a) Of the above claim(s) 5,6,15,22-62 and 66-69 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-8, 10-14, 16-21 and 63-65 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

THOMAS M. LITHGOW  
PRIMARY EXAMINER  
GROUP 17.00

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :30 Dec. 2004+10 Dec. 2004+11 Sep.t 2003.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of method claims 1-22 and 63-65 and species A (corresponding to the Fig. 1 embodiment) in the reply filed on 22 Sept 2006 is acknowledged. The traversal is on the ground(s) that the apparatus claims, as represented by independent claim 23 have been amended to include several functional phrases related to the intended operation of the apparatus. For example, "receives a mixture including a liquid and buoyant components". Structurally speaking the above phrase merely places the limitation of being capable of receiving the mixture as opposed to actually receiving the mixture (this is a method step). As such, the original reasoning is still applicable and the restriction is maintained. Applicant separately implies that the hypothetical "materially different process" proposed by the examiner in the restriction dated 22 Sept 2006 is in fact not "a materially different process". Applicant alleges the examiner may have been confused/misled because of previous claim language which has in the instant amendment dated 22 Sept 2006 been corrected. This is not found persuasive because the examiner's rationale is still sound and applicable. Consider Davis (US 3446353- Fig. 7 embodiment) in which

there is a pulp air injection device 2 which sends the pulp-air mixture off a baffle 12 which redirects the flow upwardly (this area acting as a "lift conduit") which feeds the pulp into chamber 13 (first chamber where the floats accumulate) with a slot 29 defining a communication gap to chamber 30 (second chamber) where non-floated solids accumulate. This patent would anticipate the apparatus claims but would not anticipate the method claims since the process disclosed by Davis is for beneficiating mineral ores and not for cleaning wastewater. Further, applicant elected the Fig. 1 embodiment as the specie of the species restriction. Applicant asserted claims 1-12, 14-21, 23-45, 47-61 and 63-69 read on the elected specie. This is inaccurate. Claims 1-4, 7-9, 10-14, 16-21 and 63-65 read on this embodiment. Claims 5-6, 15, 22-62 and 66-69 are withdrawn from consideration as drawn to non-elected inventions.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3-4, 7, 11, 13, 17, 19-21, 63 and 65 are rejected under 35 U.S.C. 102(b) as being anticipated by any one of DE 3521036 or DE 4302358 or Filippov (US 4490248). DE '036 discloses a process for purifying water while employing a receiving tank 1 which communicates with a lift conduit 8 into a separation chamber having a first part above the outlet of conduit 8 which accumulates buoyant components and a separation chamber second part 10 which is reached via a gap (communication passage) under a baffle. DE '368 discloses receiving tank 14 and feeds the liquid, buoyant components and gas through a lift conduit 13 into a separation chamber having a first part at 21 and a baffle 19 defining a lower gap leading to second part with conduit 18. Filippov '248 discloses a process for cleaning an effluent [col. 1, line 18+] employing a flotation chamber which includes a receiving chamber 4 with a lift conduit 7 and a separation tank first part above conduit 8 where the buoyant components accumulate a passage under guide plate 22 to a second part 23.

4. Claims 1, 3-4, 7, 11, 13-14, 17, 19-21, 63 and 65 are rejected under 35 U.S.C. 102(b) as being anticipated by any one of Kuepper (US

4156648) or FR 2591128 or Coffing (US4551246) or Brink (US 3642617).

Kuepper '648 discloses a process for purifying water including receiving chamber 72, lift conduit 73 into first part 74 with a baffle defining a passage to a second part 76 where the water is discharged. FR '128 discloses in fig. 1 a receiving chamber 7 with a lift conduit (downstream from the number 6), a first part 5 and a baffle 2 leading to a second part 10. Brink '617 discloses a method to clarify wastewater employing a flotation device which includes a receiving chamber 48, a lift conduit 90, a first part above the lift conduit, a baffle 80 defining a passage leading to a second part where clarified water is discharged. Coffing '246 discloses a receiving chamber 22, a lift conduit 20, a first part above the lift conduit and a baffle 45 defining a passage there under to a second part on the other side of baffle 45.

5. Claims 1-4, 7, 11, 13-14, 17, 19-21, 63 and 65 are rejected under 35 U.S.C. 102(b) as being anticipated by either one of Pan (US 3505188) or Peterson (US 4184954). Pan '188 discloses a receiving chamber 34, a lift conduit 36, a first part above the conduit, and a baffle 48 defining a passage to a second part 52. As the Pan device is tubular, the passage is a "tube". Peterson '954 discloses a process to purify wastewater including a

flotation device with a receiving chamber 36, a lift tube 35 which outputs to a first part 2 where the floats accumulate and tubes 5 which lead to a second part 3.

6. Claims 1, 3-4, 7-8, 11, 13-14, 17, 19-21, 63 and 65 are rejected under 35 U.S.C. 102(b) as being anticipated by either one of Kelly (US 2713026) or GB 2035285. Kelly '026 discloses a process for the purification of water including four different embodiments of a flotation cell. Any one of the four are applied against the claims while fig. 1 is specifically discussed. It is noted that Fig. 1-3 is the first embodiment (circular tank), fig. 4-5 is the second embodiment (rectangular tank) etc. In fig. 1 there is a flotation clarifier tank 10 which includes a receiving chamber 39, a lift conduit 30 leading to a first part 13 where the buoyant components are accumulated and removed, an annular baffle 14 with a passage there under leading to a second part 45 where clean water accumulates. It is noted that a portion of the clean water is recycled (at 34) to the receiving chamber as recited in claim 8. GB '285 is similar, in that there is a receiving chamber 1, a lift conduit 2, 11, a first part above the lift conduit, an annular baffle 12 including a passage there under, and a return conduit 17 for flow back to the receiving chamber.



7. Claims 1, 3-4, 7-8, 11-13, 17, 19-21, 63 and 65 are rejected under 35 U.S.C. 102(b) as being anticipated by FR 1545976. FR '976 discloses a process for purifying water including a central receiving chamber which communicates with influent pipe 5, a lift conduit 11 leading to a first part 10, a baffle 21 including a passage there under to a second part 21 for discharging clean water. The discharge of water is back to the central receiving chamber and then through a filter 4 for final discharge.

8. Claims 1, 3-4, 7, 10-11, 13-14, 17, 19-21, 63, and 65 are rejected under 35 U.S.C. 102(b) as being anticipated by either one of SU 715143 or SU 1191863. The Soviet patents are similar to many of the previous cited patents but also include a tangential inlet so as to "impart a circular motion to the mixture as it enters the receiving chamber".

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 16, 18 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of Kelly '026 or Peterson '954 or Brink '617 as applied to claims 1, 18 or 63 above, and further in view of either one of Widmann (US 6200179) or Widmann (US 5980344-cited by applicant). The combination of an IC engine and a water purification device to remove floating soot and waste fuel from the water employed to knock these contaminants from the exhaust gas thereof is taught by either one of the above Widmann patents (see suction line 46 in '344 and line 31 in '179). To employ well known flotation principals to facilitate the collection of these floating contaminants as taught by any one of Kelly '026 or Peterson '954 or Brink '617 would have been obvious to one of ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas M. Lithgow whose telephone number is 571-272-1162. The examiner can normally be reached on Mon. -Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Thomas M. Lithgow  
Primary Examiner  
Art Unit 1724

TML